In the claims:

1.   A controlled public telephone communications system comprising:

a plurality of telephones at a given site;

a programable control computer for switching, accessing, routing, timing, billing, and the control of said telephones at said site, said telephones being connected to said computer;

an off site public switched telephone network;

a Voice over Internet Protocol (VoIP) network; and

switching means for selectively connecting said telephone instruments with said Voice over Internet Protocol network.

2.   The system recited in claim 1 wherein the programming for said control computer is distributed to remote locations over said VoIP network.

3.   The system recited in claim 1 wherein said programmable control computer further comprises a VoIP gateway for servicing and control of VoIP communications.

4.   The system recited in claim 1 further comprising:

a plurality of said given sites;

at least one programmable control computer at each site;

said sites being interconnected over said VoIP network.

5.   The system recited in claim 4 further comprising:

a data exchange network interconnecting said sites, said telepone communications systems being integrated into said data exchange network.

6.   The system recited in claim 1 wherein said off site switched telephone network is a Public Switched Telephone Network (PSTN).

7.   The system recited in claim 1 wherein said off site switched telephone network is a Private Branch Exchange.

8.   The system recited in claim 1 wherein said control computer includes:
a third party call detect system.

9.   The system recited in claim 1 wherein said control computer includes:
a system responsive to personal identification numbers (PIN) keyed into said telephones for authorizing stored permitted telephone usage associated with individual PIN numbers.

10.   The system recited in claim 3 wherein said gateway is an internal gateway.

11.   The system recited in claim 3 wherein said gateway is an external gateway shared with other VoIP devices outside of said control computer.

12.   A controlled public telephone communication system comprising:
a plurality of telephones at a given site;
a programmable control system for performing the functions of switching, accessing, routing, timing, billing, and the control of said telephones at said site;
an offsite public switched telephone network;
an Ethernet network interface at said site;
a Voice over Internet Protocol (VoIP) gateway;
said telephones being connected through said Ethernet network interface and said Voice over Internet Protocol gateway to said offsite public switched telephone network.

13.   The system recited in claim 12 wherein at least some of said functions of said programable system are performed off of said site, through said Ethernet network interface.

14. The system recited in claim 12 further comprising:

a plurality of said sites;

said sites being interconnected over said Ethernet network.

15. The system recited in claim 14 further comprising:

a data exchange network interconnecting said sites over said Ethernet network.

16. The system recited in claim 15 wherein said programable system includes a control computer at each site.

17. The system recited in claim 12 wherein said off site switched telephone network is a Public Switched Telephone Network (PSTN).

18. The system recited in claim 12 wherein said programmable system performs the function of third party call detection.

19. The system recited in claim 18 further comprising:

a VoIP network;

a VoIP gateway between said telephone and said VoIP network;

a second VoIP gateway between said VoIP network and said offsite public switched telephone network.

20. The system recited in claim 19 wherein said third party call detection is performed between said second VoIP gateway and said public switched telephone network.

21.   The system recited in claim 16 wherein said control computer includes:

a system responsive to personal identification numbers (PIN) keyed into said telephones for authorizing stored permitted telephone usage associated with individual PIN numbers.

22.   The system recited in claim 16 wherein said control computer at each site includes a VoIP gateway.

23.   The system recited in claim 22 wherein said VoIP gateway includes voice compression and packetization.

24.   The system recited in claim 19 wherein said second VoIP gateway includes decompression and depacketization.

25.   The system recited in claim 19 wherein said VoIP gateway includes an Ethernet network interface.

26.   A control computer for a telephone communication system which includes a plurality of telephones at a given site which are connected to an offsite public switching network, said control computer comprising:

programmable means for the control of said telephones at said site; and

a VoIP gateway for translating signals from said telephones into data packets which can be transmitted over a VoIP network to said public switching network.

27.   The system recited in claim 26 wherein said VoIP gateway includes voice compression and packetization.

28.   The system recited in claim 26 wherein a second VoIP gateway includes decompression and depacketization.

29.   The system recited in claim 26 wherein said VoIP gateway includes an Ethernet network interface.

30.   The system recited in claim 28 further comprising:

a third party call detection system; and

a public switched telephone network, said third party call detection system being between said second VoIP gateway and said public switched telephone network.

31.   The system recited in claim 1 wherein said control computer includes:

a system responsive to a calling card number associated with a personal identification number (PIN), said numbers being keyed into said telephones for authorizing stored permitted telephone usage associated with individual numbers.